

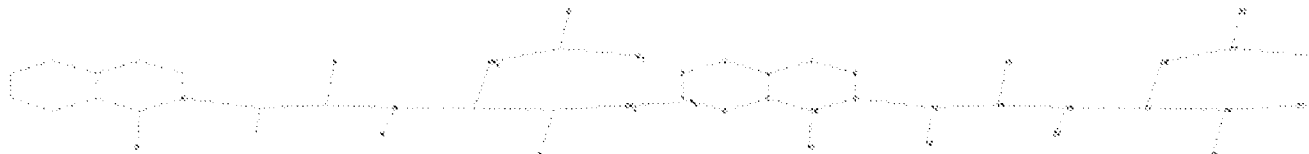
10/743,563 (RCE_06/15/2009)

***** Welcome to STN International *****
***** STN Columbus *****

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=>Uploading C:\Program Files\Stnexp\Queries\Queries\10743563_06162009_RCE.str



chain nodes :

11 12 13 14 15 16 17 18 19 20 21 22 24 25 27 29

ring nodes :

1 2 3 4 5 6 7 8 9 10

chain bonds :

9-12 10-11 12-13 12-14 14-15 14-16 16-17 16-27 17-18 17-20 18-19 18-25
20-21 21-22 21-24 25-29

ring bonds :

1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-10 7-8 8-9 9-10

exact/norm bonds :

1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-10 7-8 8-9 9-10 9-12 10-11 12-13 12-14
14-15 14-16 16-17 16-27 17-18 17-20 18-19 18-25 20-21 21-22 21-24 25-29

G1:O,N

G2:O,X

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS
19:CLASS 20:CLASS 21:CLASS 22:CLASS 24:CLASS 25:CLASS 27:CLASS 29:CLASS

=> s l1 sam

L2 4 SEA SSS SAM L1

=> s l1 full

L3 88 SEA SSS FUL L1

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L4 9 L3

=> s l4 and pd< dec 2002

22915161 PD< DEC 2002

(PD<20021200)

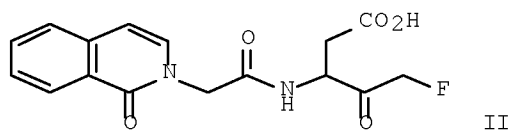
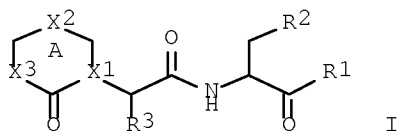
L5 3 L4 AND PD< DEC 2002

=> dis l5 1-3 bib abs hitstr

L5 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2003:991174 CAPLUS Full-text
 DN 140:28050
 TI Synthesis of peptide heterocyclic derivatives as caspase inhibitors
 IN Golec, Julian M. C.; Charifson, Paul S.; Charrier, Jean-Damien; Binch, Hayley
 PA UK
 SO U.S. Pat. Appl. Publ., 28 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|------------------|--------------|
| PI | US 20030232846 | A1 | 20031218 | US 2002-166437 | 20020610 |
| | US 7517987 | B2 | 20090414 | | |
| | WO 2001042216 | A2 | 20010614 | WO 2000-US33260 | 20001208 <-- |
| | WO 2001042216 | A3 | 20020228 | | |
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| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | NZ 530485 | A | 20060224 | NZ 2000-530485 | 20001208 |
| | CN 101348455 | A | 20090121 | CN 2008-10144399 | 20001208 |
| | AU 2006225317 | A1 | 20061102 | AU 2006-225317 | 20061010 |
| | JP 2008101019 | A | 20080501 | JP 2007-315252 | 20071205 |
| | US 20090131456 | A1 | 20090521 | US 2009-359749 | 20090126 |
| PRAI | US 1999-169812P | P | 19991208 | | |
| | WO 2000-US33260 | A1 | 20001208 | | |
| | AU 2001-24283 | A3 | 20001208 | | |
| | CN 2000-818255 | A3 | 20001208 | | |
| | JP 2001-543517 | A3 | 20001208 | | |
| | NZ 2000-519424 | A1 | 20001208 | | |
| | US 2002-166437 | A3 | 20020610 | | |
| OS | MARPAT 140:28050 | | | | |
| GI | | | | | |



AB Compds. I and their synthesis are claimed [R1 = H, CN, CHN2, (substituted)alkyl, aryl, non-aromatic heterocycle, etc.; R2 = CH2COOH, CO2H]

(or ester/amide/isosteres of); R3 = H or alkyl; X1, X3 = N or C; X2 = bond, O, S, N or C wherein any X with suitable valence may bear a substituent; each C in ring A may also be substituted; ring A substituents = H, halo, alkyl, aryl, OH, CN, etc.; A may also bear a fused ring]. Over 20 synthetic examples are given. Thus, substitution of bromoacetic acid Et ester with the corresponding isoquinolone followed by saponification and coupling to 3-amino-5-fluoro-4-hydroxypentanoic acid tert-Bu ester provided the hydroxy ester intermediate. Oxidation of the hydroxy ester followed by treatment with TFA yielded II as a white powder. Compds. of the invention are caspase inhibitors; data is provided for caspase-1,-3,-7 and caspase-8 inhibition (Ki). Also determined was inhibition of IL-1 β secretion from peripheral blood mononuclear cells and activity in a Fas ligand induced apoptosis assay. Compound II had Ki (M-1 s-1) of 248,000 for caspase-1, 130,000 for caspase-3 and an IC50 of 2.9 μ M for IL-1 β secretion. Compds. I may be used as a component of immunotherapy for the treatment of cancer.

IT 344461-03-6P 344461-10-5P

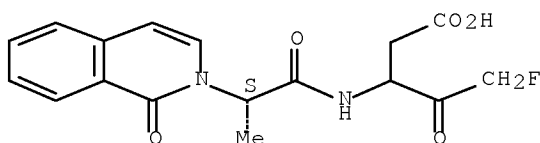
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(synthesis of peptide heterocyclic derivs. as caspase inhibitors)

RN 344461-03-6 CAPLUS

CN Pentanoic acid, 5-fluoro-4-oxo-3-[[(2S)-1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]- (CA INDEX NAME)

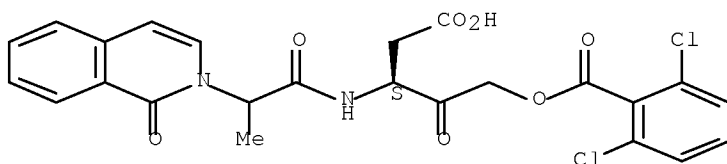
Absolute stereochemistry.



RN 344461-10-5 CAPLUS

CN Benzoic acid, 2,6-dichloro-, (3S)-4-carboxy-2-oxo-3-[[1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]butyl ester (CA INDEX NAME)

Absolute stereochemistry.



IT 344461-29-6P 344461-30-9P

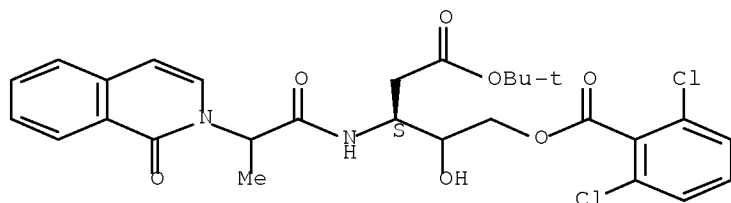
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of peptide heterocyclic derivs. as caspase inhibitors)

RN 344461-29-6 CAPLUS

CN D-glycero-Pentonic acid, 2,3-dideoxy-3-[[1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]-, 1,1-dimethylethyl ester, 5-(2,6-dichlorobenzoate), (4 ξ)- (9CI) (CA INDEX NAME)

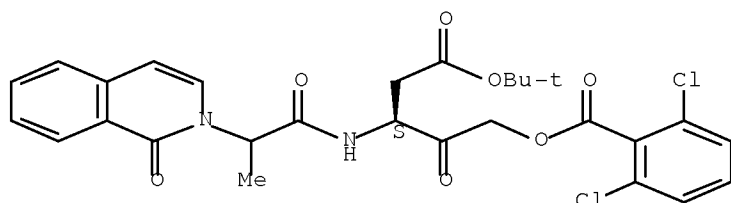
Absolute stereochemistry.



RN 344461-30-9 CAPLUS

CN Benzoic acid, 2,6-dichloro-, (3S)-5-(1,1-dimethylethoxy)-2,5-dioxo-3-[[1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]pentyl ester (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2001:435047 CAPLUS Full-text

DN 135:46192

TI Synthesis and use of heterocyclic substituted-amido halopentanoate derivatives as caspase inhibitors

IN Golec, Julian; Charifson, Paul; Charrier, Jean-Damien; Binch, Hayley

PA Vertex Pharmaceuticals Incorporated, USA

SO PCT Int. Appl., 88 pp.

CODEN: PIXXD2

DT Patent

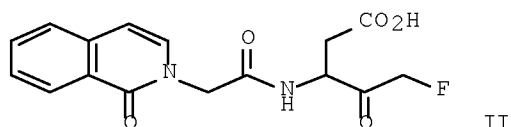
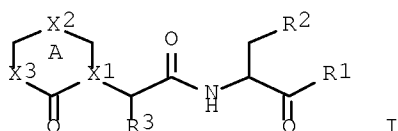
LA English

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|--|----------|------------------|--------------|
| PI | WO 2001042216 | A2 | 20010614 | WO 2000-US33260 | 20001208 <-- |
| | WO 2001042216 | A3 | 20020228 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| | TW 275586 | B | 20070311 | TW 2000-89126098 | 20001207 |
| | CA 2393710 | A1 | 20010614 | CA 2000-2393710 | 20001208 <-- |
| | BR 2000016282 | A | 20020827 | BR 2000-16282 | 20001208 <-- |

10/743,563 (RCE_06/15/2009)

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|---|----|----------|------------------|--------------|
| EP 1244626 | A2 | 20021002 | EP 2000-988026 | 20001208 <-- |
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| JP 2003516393 | T | 20030513 | JP 2001-543517 | 20001208 |
| CN 1420872 | A | 20030528 | CN 2000-818255 | 20001208 |
| CN 100415718 | C | 20080903 | | |
| HU 2003000782 | A2 | 20030929 | HU 2003-782 | 20001208 |
| HU 2003000782 | A3 | 20031128 | | |
| NZ 519424 | A | 20040326 | NZ 2000-519424 | 20001208 |
| NZ 530485 | A | 20060224 | NZ 2000-530485 | 20001208 |
| CN 101348455 | A | 20090121 | CN 2008-10144399 | 20001208 |
| ZA 2002004390 | A | 20030602 | ZA 2002-4390 | 20020531 |
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| NO 324776 | B1 | 20071210 | | |
| IN 2002KN00759 | A | 20050311 | IN 2002-KN759 | 20020605 |
| US 20030232846 | A1 | 20031218 | US 2002-166437 | 20020610 |
| US 7517987 | B2 | 20090414 | | |
| MX 2002005779 | A | 20050908 | MX 2002-5779 | 20020610 |
| AU 2006225317 | A1 | 20061102 | AU 2006-225317 | 20061010 |
| NO 2007004773 | A | 20020806 | NO 2007-4773 | 20070919 <-- |
| IN 2007KN03778 | A | 20080307 | IN 2007-KN3778 | 20071005 |
| JP 2008101019 | A | 20080501 | JP 2007-315252 | 20071205 |
| KR 2008022594 | A | 20080311 | KR 2008-703852 | 20080218 |
| US 20090131456 | A1 | 20090521 | US 2009-359749 | 20090126 |
| KR 2009035042 | A | 20090408 | KR 2009-705203 | 20090312 |
| PRAI US 1999-169812P | P | 19991208 | | |
| AU 2001-24283 | A3 | 20001208 | | |
| CN 2000-818255 | A3 | 20001208 | | |
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| NZ 2000-519424 | A1 | 20001208 | | |
| WO 2000-US33260 | W | 20001208 | | |
| IN 2002-759 | A3 | 20020605 | | |
| KR 2002-707337 | A3 | 20020608 | | |
| US 2002-166437 | A3 | 20020610 | | |
| KR 2008-703852 | A3 | 20080218 | | |
| OS MARPAT 135:46192 | | | | |
| GI | | | | |



AB Compds. I and their synthesis are claimed [wherein; R1 = H, CN, CHN2, (substituted)alkyl, aryl, non-aromatic heterocycle, etc.; R2 = CH2COOH, COOH (or ester/amide/isosteres of); R3 = H or alkyl; X1, X3 = N or C; X2 = bond, O,

S, N or C wherein any X with suitable valence may bear a substituent; each C in ring A may also be substituted; ring A substituents = H, halo, alkyl, aryl, OH, CN, etc.; A may also bear a fused ring]. Over 20 synthetic examples are given. For instance; substitution of bromoacetic acid Et ester with the corresponding isoquinolone followed by saponification and coupling to 3-amino-5-fluoro-4-hydroxypentanoic acid tert-Bu ester provided the hydroxy ester intermediate. Oxidation of the hydroxy ester followed by treatment with TFA yielded II as a white powder. Compds. of the invention are caspase inhibitors; data is provided for caspase-1,-3,-7 and caspase-8 inhibition (Ki). Also determined was inhibition of IL-1 β secretion from peripheral blood mononuclear cells and activity in a Fas ligand induced apoptosis assay. Compound II had Ki (M-1 s-1) of 248,000 for caspase-1, 130,000 for caspase-3 and an IC50 of 2.9 μ M for IL-1 β secretion. Compds. I may be used as a component of immunotherapy for the treatment of cancer.

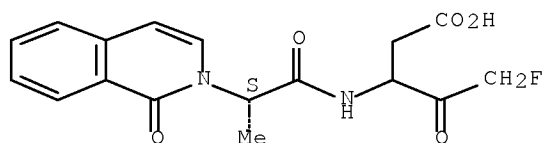
IT 344461-03-6P 344461-10-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(synthesis and use of heterocyclic substituted-amido halopentanoate derivs. as caspase inhibitors)

RN 344461-03-6 CAPLUS

CN Pentanoic acid, 5-fluoro-4-oxo-3-[[(2S)-1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]- (CA INDEX NAME)

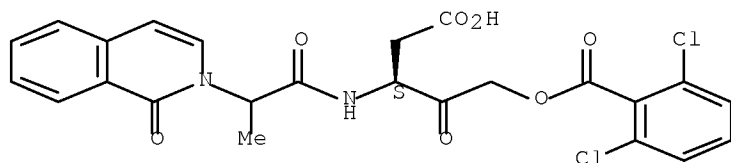
Absolute stereochemistry.



RN 344461-10-5 CAPLUS

CN Benzoic acid, 2,6-dichloro-, (3S)-4-carboxy-2-oxo-3-[[1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]butyl ester (CA INDEX NAME)

Absolute stereochemistry.



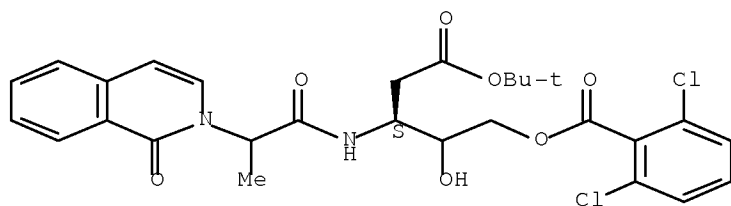
IT 344461-29-6P 344461-30-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and use of heterocyclic substituted-amido halopentanoate derivs. as caspase inhibitors)

RN 344461-29-6 CAPLUS

CN D-glycero-Pentonic acid, 2,3-dideoxy-3-[[1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]-, 1,1-dimethylethyl ester, 5-(2,6-dichlorobenzoate), (4 ξ)- (9CI) (CA INDEX NAME)

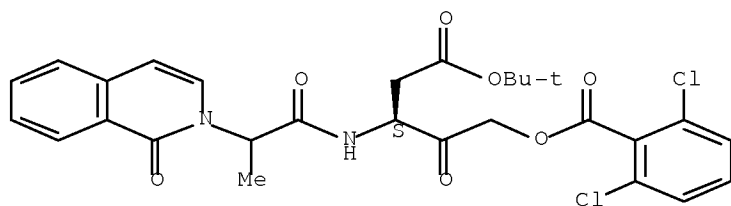
Absolute stereochemistry.



RN 344461-30-9 CAPLUS

CN Benzoic acid, 2,6-dichloro-, (3S)-5-(1,1-dimethylethoxy)-2,5-dioxo-3-[[1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]pentyl ester (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1998:251152 CAPLUS Full-text

DN 128:321926

OREF 128:63825a,63828a

TI Preparation of aspartate ester inhibitors of interleukin-1 β
converting enzyme

IN Albrecht, Hans P.; Allen, Hamish John; Brady, Kenneth Dale; Caprathe, Bradley William; Gilmore, John Lodge; Harter, William Glen; Hays, Sheryl Jeanne; Kostlan, Catherine Rose; Lunney, Elizabeth Ann; Para, Kimberly Suzanne; et al.

PA Warner-Lambert Company, USA

SO PCT Int. Appl., 179 pp.

CODEN: PIXXD2

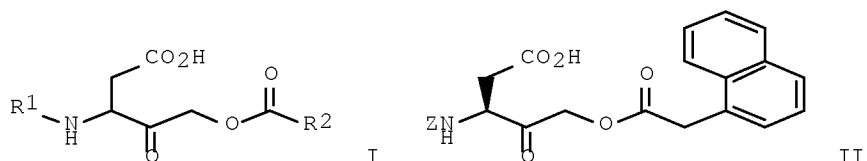
DT Patent

LA English

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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| WO 9816502 | A1 | 19980423 | WO 1997-US18514 | 19971009 <-- |
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| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
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| AU 738341 | B2 | 20010913 | | |
| EP 932598 | A1 | 19990804 | EP 1997-911715 | 19971009 <-- |
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| BR 9712530 | A | 19991019 | BR 1997-12530 | 19971009 <-- |
| JP 2001506974 | T | 20010529 | JP 1998-518519 | 19971009 <-- |
| NO 9901677 | A | 19990609 | NO 1999-1677 | 19990409 <-- |
| KR 2000049048 | A | 20000725 | KR 1999-703117 | 19990410 <-- |
| PRAI US 1996-28322P | P | 19961011 | | |
| WO 1997-US18514 | W | 19971009 | | |
| OS MARPAT 128:321926 | | | | |
| GI | | | | |



AB The present invention relates to compds. I [R1 = carboxy, acyl, amino acid residue, etc.; R2 = (CR2)n-X-R3; each R = independently H, C1-6 alkyl, OH; R3 = (un)substituted aryl, (un)substituted heteroaryl, (un)substituted heterocyclyl, cycloalkyl, etc; X = bond, O, S; n = 0-3; and the pharmaceutically acceptable salts, esters, amides, and prodrugs thereof] as inhibitors of interleukin-1 β converting enzyme (ICE). This invention also relates to a method of treatment of stroke, inflammatory diseases, reperfusion injury, Alzheimer's disease, and shigellosis, and to a pharmaceutically acceptable composition that contains a compound that is an inhibitor of interleukin-1 β converting enzyme. Thus, substitution of Z-Asp(OCMe3)-CH2Br (Z = PhCH2O2C) with 1-naphthylacetic acid, followed by acidic deprotection, gave desired aspartate ester derivative II. II inhibited ICE with Ki = 0.460 μ M and IC50 = 3.100 μ M, and inhibited Ich-2 (caspase-4) with IC50 = 3.60 μ M, as determined using in vitro assays. Related prepared compds. I (196 examples) were also tested for ICE inhibition (Ki values of 0.00008 to 76 μ M and IC50 values of 0.0013 to 32 μ M), and Ich-2 inhibition (IC50 = 0.021 to 76 μ M).

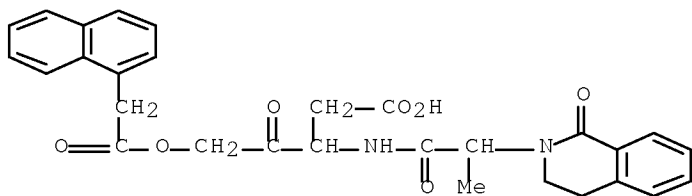
IT 206863-96-9P 206863-97-0P 206864-00-8P
206864-01-9P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aspartate ester inhibitors of interleukin-1 β converting enzyme)

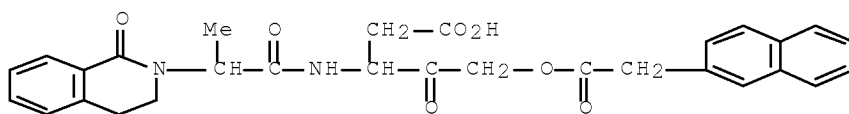
RN 206863-96-9 CAPLUS

CN 1-Naphthaleneacetic acid, 4-carboxy-3-[[2-(3,4-dihydro-1-oxo-2(1H)-isoquinolinyl)-1-oxopropyl]amino]-2-oxobutyl ester (CA INDEX NAME)

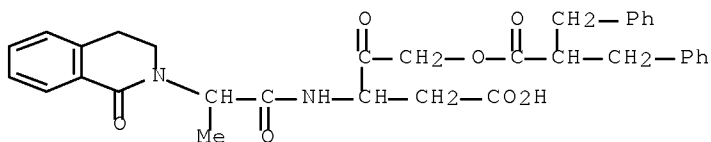


RN 206863-97-0 CAPLUS

CN 2-Naphthaleneacetic acid, 4-carboxy-3-[[2-(3,4-dihydro-1-oxo-2(1H)-isoquinolinyl)-1-oxopropyl]amino]-2-oxobutyl ester (CA INDEX NAME)

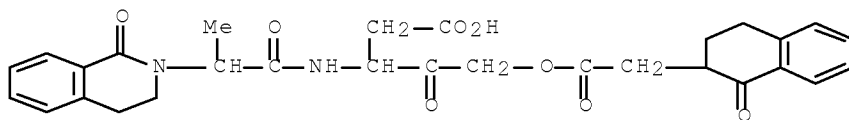


RN 206864-00-8 CAPLUS

CN Benzenepropanoic acid, α -(phenylmethyl)-, 4-carboxy-3-[[2-(3,4-dihydro-1-oxo-2(1H)-isoquinolinyl)-1-oxopropyl]amino]-2-oxobutyl ester (CA INDEX NAME)

RN 206864-01-9 CAPLUS

CN 2-Naphthaleneacetic acid, 1,2,3,4-tetrahydro-1-oxo-, 4-carboxy-3-[[2-(3,4-dihydro-1-oxo-2(1H)-isoquinolinyl)-1-oxopropyl]amino]-2-oxobutyl ester (CA INDEX NAME)



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s 14 not 15

L6 6 L4 NOT L5

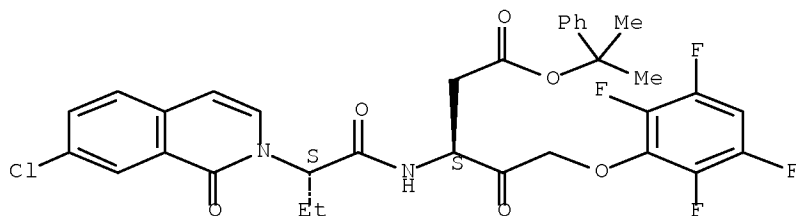
=> dis 16 1-6 bib abs fhitstr

L6 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2007:593290 CAPLUS Full-text
 DN 147:202903
 TI Exploring Peptide-likeness of Active Molecules Using 2D Fingerprint Methods
 AU Eckert, Hanna; Bajorath, Juergen
 CS Department of Life Science Informatics, Rheinische Friedrich-Wilhelms-Universitaet, Bonn, D-53113, Germany
 SO Journal of Chemical Information and Modeling (2007), 47(4), 1366-1378
 CODEN: JCISD8; ISSN: 1549-9596
 PB American Chemical Society
 DT Journal
 LA English
 AB Similarity searching for peptide-like small mols. is a difficult task because the amide backbone shared by these mols. tends to mask features that determine biol. activity. The authors have investigated 2D fingerprints for their ability to differentiate between peptide-like mols. having different activity or to facilitate a peptidomimetic transition from mols. with strong peptide character to compds. having little or none. For these purposes, different compound activity classes were assembled consisting of mols. having strong, moderate, and weak peptide character. For the quantification of peptide character, a "peptide flavor" index was introduced. In systematic search calcns., an encouraging finding has been that most of the investigated 2D fingerprints were capable of distinguishing between peptide-like mols. having different activities. However, only two fingerprints of different design also displayed a strong tendency to detect mols. with decreasing peptide character. One of these search tools is a recently introduced property descriptor-based fingerprint that showed two addnl. advantages: its flexible design could be adjusted to increasingly recover mols. with little peptide-likeness, and in addition, its search performance was not affected by differences in mol. size.

IT 721398-07-8
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); BIOL (Biological study)
 (exploring peptide-likeness of active mols. using 2D fingerprint methods)

RN 721398-07-8 CAPLUS
 CN Pentanoic acid, 3-[[[(2S)-2-(7-chloro-1-oxo-2(1H)-isoquinolinyl)-1-oxobutyl]amino]-4-oxo-5-(2,3,5,6-tetrafluorophenoxy)-, 1-methyl-1-phenylethyl ester, (3S)- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2007:150976 CAPLUS Full-text
 DN 146:235880
 TI Preparation of caspase inhibitor prodrugs

IN Durrant, Steven; Charrier, Jean-Damien; Studley, John
 PA Vertex Pharmaceuticals Incorporated, USA
 SO PCT Int. Appl., 49pp.
 CODEN: PIXXD2

DT Patent
 LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|------------------|----------|
| PI | WO 2007015931 | A2 | 20070208 | WO 2006-US28174 | 20060720 |
| | WO 2007015931 | A3 | 20070607 | | |
| | W: | | | | |
| | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| | RW: | | | | |
| | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA | | | | |
| | AU 2006276096 | A1 | 20070208 | AU 2006-276096 | 20060720 |
| | CA 2616337 | A1 | 20070208 | CA 2006-2616337 | 20060720 |
| | US 20070155718 | A1 | 20070705 | US 2006-489939 | 20060720 |
| | EP 1910379 | A2 | 20080416 | EP 2006-787963 | 20060720 |
| | R: | | | | |
| | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR | | | | |
| | JP 2009502922 | T | 20090129 | JP 2008-523976 | 20060720 |
| | MX 2008001360 | A | 20080815 | MX 2008-1360 | 20080128 |
| | IN 2008KN00648 | A | 20081114 | IN 2008-KN648 | 20080213 |
| | KR 2008038369 | A | 20080506 | KR 2008-704718 | 20080227 |
| | NO 2008001050 | A | 20080428 | NO 2008-1050 | 20080228 |
| | CN 101268084 | A | 20080917 | CN 2006-80034509 | 20080319 |
| PRAI | US 2005-703375P | P | 20050728 | | |
| | WO 2006-US28174 | W | 20060720 | | |
| OS | MARPAT 146:235880 | | | | |

AB This invention relates to prodrugs of caspase inhibitors comprising of a furo [3,2-d]oxazolin-5-one moiety which, under specific conditions, can convert into biol. active compds., particularly caspase inhibitors. This invention also relates to the processes for preparing these prodrugs of caspase inhibitors. This invention further relates to pharmaceutical compns. comprising said prodrugs and to the use thereof for the treatment of diseases related to inflammatory or degenerative conditions. Trifluoroacetic anhydride was added to a solution of (S)-carbazole-9-carboxylic acid 1-(1-carboxymethyl-3-fluoro-2-oxo-propylcarbamoyl)-2-methyl-Pr ester in anhydrous dichloromethane under a nitrogen atmosphere at ambient temperature. After one hour, the reaction was diluted with anhydrous dichloromethane and tris-(2-aminoethyl)amine polystyrene resin was added and the reaction was stirred for a further one hour. The resin was removed by filtration and the filtrate concentrated in vacuo and triturated with dichloromethane and petroleum ether to give (S)-carbazole-9-carboxylic acid 1-(3a-fluoromethyl-5-oxo-3a,5,6,6a-tetrahydro-furo[3,2-d]oxazol-2-yl)-2-methyl-propylester as a white solid.

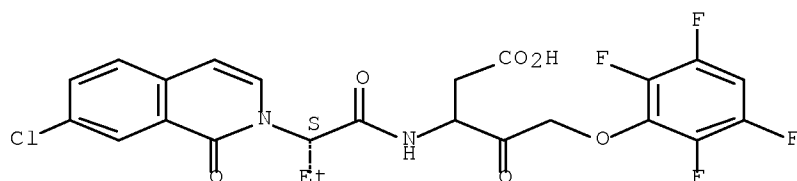
IT 618460-08-5

RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of caspase inhibitor prodrugs)

RN 618460-08-5 CAPLUS

CN Pentanoic acid, 3-[[(2S)-2-(7-chloro-1-oxo-2(1H)-isoquinolinyl)-1-oxobutyl]amino]-4-oxo-5-(2,3,5,6-tetrafluorophenoxy)- (CA INDEX NAME)

Absolute stereochemistry.

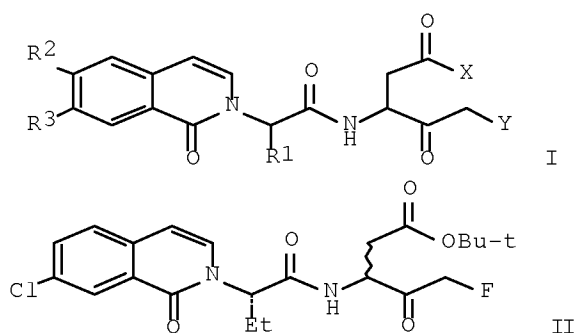


L6 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2004:565214 CAPLUS Full-text
 DN 141:106388
 TI Preparation of 4-oxo-3-(1-oxo-1H-isoquinolin-2-ylacetyl-amino)-pentanoic acid ester and amide derivatives as caspase inhibitors
 IN Charrier, Jean-Damien; Mortimore, Michael; Studley, John R.
 PA Vertex Pharmaceuticals Incorporated, USA
 SO PCT Int. Appl., 104 pp.
 CODEN: PIXXD2

DT Patent
 LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-------------------|--|----------|------------------|----------|
| PI | WO 2004058718 | A1 | 20040715 | WO 2003-US40870 | 20031222 |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | |
| | RW: | BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | CA 2511235 | A1 | 20040715 | CA 2003-2511235 | 20031222 |
| | AU 2003303345 | A1 | 20040722 | AU 2003-303345 | 20031222 |
| | US 20040192612 | A1 | 20040930 | US 2003-743563 | 20031222 |
| | EP 1581501 | A1 | 20051005 | EP 2003-814289 | 20031222 |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | |
| | CN 1745065 | A | 20060308 | CN 2003-80109285 | 20031222 |
| | CN 100366612 | C | 20080206 | | |
| | JP 2006513220 | T | 20060420 | JP 2004-563916 | 20031222 |
| | HK 1087701 | A1 | 20090102 | HK 2006-107876 | 20060714 |
| | JP 2007070368 | A | 20070322 | JP 2006-343613 | 20061220 |
| PRAI | US 2002-435133P | P | 20021220 | | |
| | JP 2004-563916 | A3 | 20031222 | | |
| | WO 2003-US40870 | W | 20031222 | | |
| OS | MARPAT 141:106388 | | | | |
| GI | | | | | |



AB The title compds. of formula I [X = alkoxy, (substituted) NH₂, etc.; Y = halo, trifluorophenoxy, tetrafluorophenoxy; R₁ = alkyl; R₂, R₃ = H, halo, OCF₃, CN, CF₃] are prepared. The present invention also provides pharmaceutical compns. and methods using such compns. for treating a caspase-mediated disease, particularly in the central nervous system. Thus, II was prepared from 7-chloroisoquinolin-1-one (preparation given), (S)-2-aminobutyric acid tert-Bu ester and 3-amino-5-fluoro-4-hydroxypentanoic acid tert-Bu ester.

IT 640286-59-5P

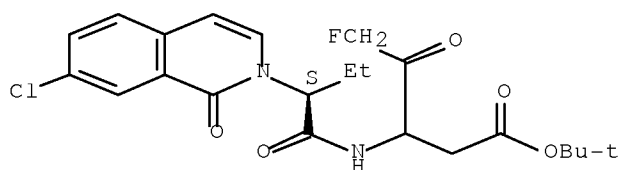
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of (oxoisoquinolinylacetyl-amino)-oxopentanoic acid ester and amide derivs. as caspase inhibitors)

RN 640286-59-5 CAPLUS

CN Pentanoic acid, 3-[[[(2S)-2-(7-chloro-1-oxo-2(1H)-isoquinolinyl)-1-oxobutyl]amino]-5-fluoro-4-oxo-, 1,1-dimethylethyl ester (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:20662 CAPLUS [Full-text](#)

DN 140:77410

TI Preparation of isoquinolinone and quinazolinone peptide derivatives as caspase inhibitors

IN Knegt, Ronald; Mortimore, Michael; Studley, John; Millan, David

PA Vertex Pharmaceuticals Incorporated, USA

SO PCT Int. Appl., 95 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.

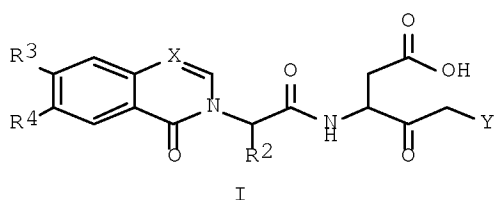
KIND

DATE

APPLICATION NO.

DATE

| | | | | | |
|------|------------------|--|----------|-----------------|----------|
| PI | WO 2004002961 | A1 | 20040108 | WO 2003-US20557 | 20030627 |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | CA 2493646 | A1 | 20040108 | CA 2003-2493646 | 20030627 |
| | AU 2003248758 | A1 | 20040119 | AU 2003-248758 | 20030627 |
| | US 20040072850 | A1 | 20040415 | US 2003-609147 | 20030627 |
| | BR 2003012232 | A | 20050510 | BR 2003-12232 | 20030627 |
| | EP 1539701 | A1 | 20050615 | EP 2003-762231 | 20030627 |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | |
| | CN 1675184 | A | 20050928 | CN 2003-818793 | 20030627 |
| | JP 2005533825 | T | 20051110 | JP 2004-518103 | 20030627 |
| | NZ 537807 | A | 20070531 | NZ 2003-537807 | 20030627 |
| | MX 2005000069 | A | 20050411 | MX 2005-69 | 20050103 |
| | IN 2005KN00083 | A | 20050916 | IN 2005-KN83 | 20050124 |
| | ZA 2005000776 | A | 20060927 | ZA 2005-776 | 20050126 |
| PRAI | US 2002-392592P | P | 20020628 | | |
| | US 2002-435073P | P | 20021220 | | |
| | WO 2003-US20557 | W | 20030627 | | |
| OS | MARPAT 140:77410 | | | | |
| GI | | | | | |



AB The invention relates to isoquinolinones and quinazolinones I [X is CH or N; Y is halo, tri- or tetrafluorophenoxy; R2 is alkyl; R3 is H, halo, OCF3, CN, or CF3; R4 is groups R3 or alkylthio, (un)substituted Ph, phenoxy, or phenylthio; with the proviso that when Y is halo, then R3 and R4 are not both H] which are caspase inhibitors useful in compns. for the treatment of various diseases, conditions, or disorders. Thus, I (X = CH, Y = F, R2 = Et, R3 = H, R4 = Cl), prepared by coupling of (S)-2-(7-chloro-1-oxo-1H-isoquinolin-2-yl)butyric acid (preparation given) with 3-amino-5-fluoro-4-hydroxypentanoic acid tert-Bu ester, had Ki (M-1 s-1) > 500,000 for inhibition of caspase-1 or caspase-3, Ki 100,000-500,000 for inhibition of caspase-8, and IC50 < 1 μ M for inhibition of interleukin-1 β secretion.

IT 618459-84-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

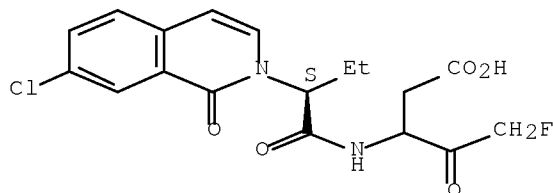
(preparation of isoquinolinone and quinazolinone peptide derivs. as caspase

inhibitors)

RN 618459-84-0 CAPLUS

CN Pentanoic acid, 3-[[(2S)-2-(7-chloro-1-oxo-2(1H)-isoquinolinyl)-1-oxobutyl]amino]-5-fluoro-4-oxo- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2003:855766 CAPLUS Full-text

DN 139:345913

TI Identification of tumor necrosis factor α (TNF- α) modulator
compounds, and use for treatment of TNF-mediated diseases

IN Miller, Karen; Diu-Hercend, Anita; Hercend, Thierry; Lang, Paul; Weber,
Peter; Golec, Julian; Mortimore, Michael

PA Vertex Pharmaceuticals Incorporated, USA

SO PCT Int. Appl., 268 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------|--|----------|-----------------|----------|
| PI | WO 2003088917 | A2 | 20031030 | WO 2003-US12262 | 20030417 |
| | WO 2003088917 | A3 | 20040304 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | AU 2003225088 | A1 | 20031103 | AU 2003-225088 | 20030417 |
| | US 20040048797 | A1 | 20040311 | US 2003-419327 | 20030417 |
| | EP 1499898 | A2 | 20050126 | EP 2003-721795 | 20030417 |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | |
| PRAI | US 2002-374434P | P | 20020419 | | |
| | WO 2003-US12262 | W | 20030417 | | |

AB The invention discloses methods for identifying compds. useful for regulating TNF- α levels and/or activity. The invention also discloses methods for decreasing TNF- α levels and/or activity. Compds. and compns. of the invention are useful for treating TNF-mediated diseases. The invention further discloses kits comprising the compds. and compns. herein and a tool for

measuring TNF- α activity and/or levels. Preparation of selected compds., e.g. [3S/R, (2S)]-5-fluoro-4-oxo-3-[(1-(phenothiazine-10-carbonyl)piperidine-2-carbonyl)amino]pentanoic acid, is described.

IT 344461-03-6

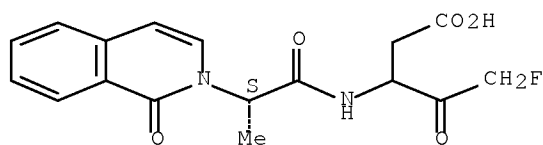
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(TNF- α modulator compound identification methods, and use for treatment of TNF-mediated diseases)

RN 344461-03-6 CAPLUS

CN Pentanoic acid, 5-fluoro-4-oxo-3-[(2S)-1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2003:656594 CAPLUS [Full-text](#)

DN 139:191460

TI Phospholipids as caspase inhibitor prodrugs

IN Mortimore, Michael; Golec, Julian M. C.

PA Vertex Pharmaceuticals Incorporated, USA

SO PCT Int. Appl., 256 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------|--|----------|-----------------|----------|
| PI | WO 2003068242 | A1 | 20030821 | WO 2003-US4457 | 20030211 |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | AU 2003211052 | A1 | 20030904 | AU 2003-211052 | 20030211 |
| | US 20040019017 | A1 | 20040129 | US 2003-366192 | 20030211 |
| | US 7410956 | B2 | 20080812 | | |
| | EP 1485107 | A1 | 20041215 | EP 2003-739810 | 20030211 |
| | R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | |
| | US 20080199454 | A1 | 20080821 | US 2007-5068 | 20071221 |
| PRAI | US 2002-355889P | P | 20020211 | | |
| | US 2003-366192 | A3 | 20030211 | | |
| | WO 2003-US4457 | W | 20030211 | | |

OS MARPAT 139:191460

AB The invention relates to compds. which are prodrugs of caspase inhibitors and pharmaceutically acceptable salts thereof. The invention further relates to the release of caspase inhibitors from these compds. through selective bond cleavage. The invention further relates to pharmaceutical compns. comprising these compds., which are particularly well-suited for treatment of caspase-mediated diseases, including inflammatory and degenerative diseases. The invention further relates to methods for preparing compds. of this invention.

IT 582317-55-3

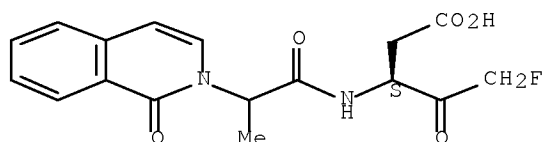
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(phospholipids as caspase inhibitor prodrugs)

RN 582317-55-3 CAPLUS

CN Pentanoic acid, 5-fluoro-4-oxo-3-[[1-oxo-2-(1-oxo-2(1H)-isoquinolinyl)propyl]amino]-, (3S)- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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STN INTERNATIONAL LOGOFF AT 07:08:15 ON 16 JUN 2009